

# STATE OF ALASKA

## DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF ENVIRONMENTAL QUALITY  
P.O. BOX O, JUNEAU, AK 99811-1800

STEVE COWPER, GOVERNOR

Telephone No.  
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November 30, 1990

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OCEAN PROGRAMS SECTION  
EPA - REGION 10

Ms. Sally Marquis  
Water Quality Standards Coordinator  
U.S. Environmental Protection Agency  
Region X  
1200 Sixth Avenue  
Seattle, Washington 98101

Dear Ms. Marquis:

You asked that I summarize background information on the site-specific criteria proposal for the Point Woronzoff outfall, the action the department intends to take and the regulatory basis for that action. This letter does not address other 301(h) waiver requirements which are dealt with through separate correspondence.

### BACKGROUND

Discussion has occurred beginning in 1989 between the Environmental Protection Agency (EPA), the Anchorage Water and Wastewater Utility (AWWU) and the department to address the unique requirements of Section 301(h) concerning water quality criteria and how this issue might be addressed before draft NPDES permit issuance. Water quality information has been gathered by the AWWU to augment their application for site-specific criteria and permit renewal. This includes water quality sampling in Upper Cook Inlet and a synthesis of existing biological and chemical information. Metals data are not extensive for Cook Inlet. Gathering additional ambient water quality data may be required at a future date.

The procedures prescribed in 18 AAC 70.025 for modifying water quality criteria in 18 AAC 70.020(b) provide the legal basis for evaluating the propriety of and, where appropriate, adopting site-specific criteria in its permits or variances. When EPA approved these procedures as an amendment to the state water quality standards, it authorized the department to invoke this procedure accordingly. The procedure does not required formal rulemaking, but does require public notice and opportunity for comment. The purpose of writing this procedure into the water quality standards regulations was to deal with exactly the type of situation that the Point Woronzoff discharge presents.



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It is also important to recognize the distinction between modifying the Gold Book criteria statewide and modifying the criteria in site-specific instances. In the former instance, rulemaking is certainly required. An example is our current triennial review of the water quality standards. This review will result in consistency between state and federal regulations for adopting aquatic life and human health criteria for toxics. For site-specific instances, however, 18 AAC 70.025(a) specifies "In its permits or variances, the department will, in its discretion, modify the water quality criteria set out in 18 AAC 70.020(b) . . ." In the event that site-specific criteria were approved, criteria would not be modified outside of the immediate vicinity of the outfall and any designated mixing zone.

For the Point Woronzoff discharge, it has been demonstrated to the department's satisfaction that site-specific criteria are worthy of consideration. As an indication, the department received no opposing comments from the first public notice of this proposal. The sequence of steps we would follow in considering the request for site-specific criteria and any mixing zone, as appropriate, is identical to that used for all applicants. Namely, the department would require written statements from AWWU that address each of the requirements in 18 AAC 70.025(a)(1) and (a)(2), (b) and (c). Much of this information has already been provided in the application for permit renewal and supporting water quality data. Existing and newly-provided information would form the factual basis for developing the specific proposal in the public notice.

For those cases where effluent concentrations exceed natural concentrations, two approaches are available to the applicant. The applicant may apply for site specific criteria under 18 AAC 70.025(a)(1) with supporting information that also addresses 18 AAC 70.025(b) and (c). In cases where the above conditions cannot be met, application for a mixing zone is required and must meet all the requirements of 18 AAC 70.032 (a)(1)-(3) and (b) through (e) prior to being granted. For example, it must be demonstrated that mercury discharges do not and will not result in bioaccumulation or persistence in the environment to the point of causing adverse effects on aquatic life and human health. A demonstration must also be made that no adverse effects occur on anadromous fish spawning or rearing, and no barrier is formed to migrating species in the Point Woronzoff area. The contractor for the AWWU has informed us that they will compile this information. We will ensure that the process leading to the public involvement stage is consistent with our regulations.

On October 25, 1990, department staff were invited to meet with the AWWU to discuss recent data collected and department requirements and procedures under 18 AAC 70.025. The attached letter summarizes some discussion points at that meeting. Included are attachments and graphs the department requested on effluent and ambient concentrations for hexavalent chromium, copper, mercury, nickel, leads and zinc. Additional information on mean ambient and effluent levels has been requested to assist us in statistically evaluating the frequency distribution of metals concentrations. The department requested that all metals concentrations be reported using the total recoverable method as current EPA guidance specifies this method. Use of other methods, such as total dissolved, is inconsistent with current federal guidance.



The November 16 letter from AWWU recommends site-specific criteria for the six metals. At the October 25 meeting, AWWU presented information that indicated effluent concentrations for four of the six metals (Cr, Ni, Pb, Zn) were below maximum ambient concentrations. For mercury, AWWU states that seasonal pulses have resulted in effluent concentrations exceeding mean ambient and maximum ambient concentrations of mercury. AWWU hypothesizes that unregulated releases of mercury to the wastewater collection system may be the cause of the seasonal spikes. As a first step, we would recommend that the source of mercury be further investigated and controlled. Should controls prove infeasible, the applicant may request a mixing zone by addressing the sequential regulatory steps in 18 AAC 70.032 (a)(1), (2) and (3) as well as (b) through (e) in determining whether a mixing zone is appropriate and, if so, the size of any mixing zone. Much of this information has been provided and is still being analyzed. Effluent concentrations of copper also appear slightly elevated above ambient conditions. The sequential procedures mentioned above for mercury would need to be addressed by the applicant for copper and any other metals where effluent concentrations exceed mean ambient concentrations. An alternative would be to request site-specific standards in accordance with 18 AAC 70.025(a)(1) instead of under (a)(2).

#### DEPARTMENT ACTION

The department will be taking the following action:

1. Publish notice of the request for site-specific criteria in newspapers of general circulation in the state. As with the first public notice, EPA will be given an opportunity to review the notice before publication. The department will be reviewing additional information provided by AWWU to establish the appropriate site-specific criteria.
2. Use any adopted site-specific criteria as the basis for conditions of the Section 401 certificate of reasonable assurance consistent with 18 AAC 70.025(a).
3. Consider the AWWU-requested mixing zone and supporting information provided in compliance with 18 AAC 70.032 (a) through (e). The point of discharge would be the compliance location for metals for which no mixing zone is granted.

As I mentioned to you during our telephone conversation of November 20, the department would prefer the alternative of jointly issuing the public notice with EPA's notice of the draft NPDES permit. This approach would allow our agencies and the public to deal with both the permit and site-specific criteria issues simultaneously. The approach would be particularly efficient if a public hearing were requested and granted. I would appreciate your thoughts on this approach.

In conclusion, we look forward to working closely with EPA on the NPDES permit renewal. I hope this letter clarifies the department's position on the site-specific criteria process and helps prepare you for your upcoming meeting with the Municipality of Anchorage.

Sincerely,

A handwritten signature in black ink, appearing to read "Doug Redburn", with a long horizontal flourish extending to the right.

Douglas R. Redburn  
Chief  
Water Quality Management

Attachments

cc Dan Easton  
Larry Dietrick  
George Wilson  
Dave Sturdevant  
Carla Fisher  
Charley Bryant, AWWU